



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
Chennai 600 036



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The Manager (Project Purchase)

Date: 09.03.2023

Open Tender Reference No: PH/JAYE/02/IOE23/GLOWTOFAB

GEM NAR ID: GEM/GARPTS/09032023/FFQQDA7PT14M

Due Date/Time: 23.03.2023 @ 3:00 PM

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, Tenders are invited in two bid system from Class-I local suppliers and Class II local suppliers, for the supply of “**Glovebox Workstation to fabricate LEDs**” Conforming to the specifications given in **Annexure -A**.

Tender Documents may be downloaded from Central Public Procurement Portal <https://etenders.gov.in/e procure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <https://etenders.gov.in/e procure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at “**Help for contractors**”. [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this eProcurement Portal”]

Bidders can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type ‘IIT’. Thereafter, click on “GO” button to view all IIT Madras tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://etenders.gov.in/e procure/app> as per the schedule attached.

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| 1) | Pre-bid Meeting Details | : | NA |
| 2) | ICSR Vendor Registration | : | Vendor registration code. Vendor registration with IC&SR (IITM) is mandatory for bidders to participate in tenders. ** For Vendor Registration & Guidelines, Please follow the website : https://icandsr.iitm.ac.in/vendorportal ; Helpdesk: vendorhelpdesk@icsrpis.iitm.ac.in |

No manual bids will be accepted. All tender documents including Technical and Financial bids should be submitted in the E-procurement portal.

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| Last date for receipt of tender | : | 23.03.2023 @ 3:00 PM |
| Date & time of opening of tender | : | 24.03.2023 @ 3:00 PM |

3. Instructions to the Bidder:

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| <u>A)</u> | Searching for tender documents | : | <ul style="list-style-type: none"> • There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal. • Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective “My Tender” folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document. • The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk. |
| <u>B)</u> | Assistance to bidders | : | <ul style="list-style-type: none"> • Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender. • Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is [0120-4200462, 0120-4001002, 0120-4001005] |
| <u>C)</u> | Enrollment Process to Bidders | : | <p><u>REGISTRATION</u></p> <ul style="list-style-type: none"> • Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal URL:https://etenders.gov.in/eprocure/app by clicking on “Online Bidder Enrollment”. Enrollment on the CPP Portal is free of charge. • As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts. • Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal. • Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) • Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. • Bidder then may log in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken. • Possession of a Valid Class II/III Digital Signature Certificate |

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| | | | <p>(DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://etenders.gov.in/eprocure/app</p> <ul style="list-style-type: none"> • Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://etenders.gov.in/eprocure/app under the “Information about DSC”. |
| <u>D)</u> | Preparation of bids | : | <ul style="list-style-type: none"> • Bidder should take into account any corrigendum published on the tender document before submitting their bids. • Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid. • Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender document / schedule and generally shall be in PDF / XLS formats as the case may be. Bid documents may be scanned with 100 dpi with black and white option. • To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GSTIN Details, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. |
| <u>E)</u> | Submission of bids | : | <ul style="list-style-type: none"> • Bidder should log into the site well in advance for bid submission so that he/she can upload the bid in time i.e. on or before the bid submission date and time. Bidder will be responsible for any delay due to other issues. • The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document. • Bidder has to select the bid security declaration. Otherwise, the tender will be summarily rejected. • A standard BOQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BOQ file, open it and complete the detail with their respective financial quotes and other details (such as name of the bidder). If the BOQ file is found to be modified by the bidder, the bid will be rejected. • The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The |

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| | | <p>bidders should follow this time during bid submission.</p> <ul style="list-style-type: none"> • The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues. • The uploaded tender documents become readable only after the tender opening by the authorized bid openers. • Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details. • Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet. • More information useful for submitting online bids on the CPP Portal may be obtained at: https://etenders.gov.in/eprocure/app. • All tender documents including pre-qualification bid, Technical Bid & Financial Bid should be submitted separately in online CPP portal as per the specified format only. Right is reserved to ignore any tender which fails to comply with the above instructions. No manual bid submission will be entertained. |
| F) | Marking on Technical Bid | <ul style="list-style-type: none"> • The bidder eligibility criteria, technical specification and supply of item for this tender is given in Annexure A. • The Bidders shall go through the specification and submit the technical bid. • The Technical bid should be submitted in the proforma as per Annexure-B in pdf format only through online (e-tender). No manual submission of bid will be entertained. • The technical bid should have a page-wise heading as “Technical Bid” and page no. in all pages with seal and signature of authorized signatory. The total no. of pages should be mentioned at the last page of the documents. • The technical bid should consist of bidder eligibility criteria details and all technical details along with catalogue/ pamphlet which will give a detailed description of product with technical data sheet so that technical compliance can be verified. |
| G) | Marking on Price Bid | <ul style="list-style-type: none"> • Financial bid (BoQ) should be submitted in the prescribed proforma format as per Annexure-C in xls format through e-tender only. No manual or other form of submission of Financial Bid will not be entertained |

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| 4) | <p>Preparation of Tender: The bidders should submit the bids in two bid system as detailed below.</p> <p>Bid I _Technical Bid</p> <p>The technical bid should consist of bidder eligibility criteria and technical specification compliance sheet as per Annexure-B.</p> <p>Bid II _Price Bid</p> <p>The price bid should be submitted in excel format (BoQ) as per the proforma (Annexure C) uploaded in the e-Tender web site. The Quoted price should be for supply and installation of the item and inclusive of all cost and statutory levies at IIT Madras.</p> |
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| 5) | <p>Price:</p> <ul style="list-style-type: none"> a) The price should be quoted only in INR net per unit (after breakup) and must include all packing, transit insurance and delivery charges to the ent of Department of Physics. b) The rate quoted shall be all inclusive of all taxes and no extra payment will be made other than statutory revisions as per the terms and conditions stipulated in this contract document. c) The percentage of tax & duties should be clearly indicated separately. IIT Madras is eligible for custom duty (5.5%). Relevant certificates will be issued wherever necessary. d) The offer/bids should be submitted through online only in two bid system i.e. Technical Bid and Financial Bid separately. |
| 6) | <p>Tenderer shall submit along with this tender:</p> <ul style="list-style-type: none"> (i) Proof of having ISO or other equivalent certification given by appropriate authorities. (ii) Name and full address of the Banker and their swift code and PAN No. and GSTIN number. (iii) GST registration proof showing registration number, area of registration etc. (iv) All of your future correspondences including Invoices should bear the GST No. and Area Code. |
| 7) | <p>Terms of Delivery:</p> <p>Supplier will be fully responsible for the safe carriage, Installation/Commissioning of goods up to the Department of Physics, IIT Madras or named place as per PO, Insurance coverage will be in the scope of the supplier.</p> <p>The tenderer should indicate clearly the time required for delivery of the item (subject to the approval of the Executive Committee-IIT-Madras). In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.</p> <p>In the event of delay or non-supply of materials/execution of Contract beyond the date of delivery/completion of job. The penalty will be levied @1% per week of delay subject to a max of 10% of the value of purchase order and if the delay is more than accepted time frame by IIT M, the PO would be partially or fully cancelled and liquidated damages will be enforced accordingly.</p> |
| 8) | <p>Period for which the offer will remain open:</p> <p>The Tender shall remain open for acceptance/validity till: 120 days from the date of opening of the tender. However, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day.</p> |
| 9) | <p>EMD:</p> <p>The EMD of Rs.4,00,000 to be transferred to the account details mentioned in Annexure D and proof should be enclosed in the Technical Bid. Any offer not accompanied with the EMD shall be rejected summarily as non-responsive.</p> <p>The EMD of the unsuccessful bidders shall be returned within 30 days of the end of the bid validity period. The same shall be forfeited, if the tenderers withdraw their offer after the opening during the bid validity period. The Institute shall not be liable for payment of any interest on EMD.</p> <p>EMD is exempted for Micro and Small Enterprises (MSE) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) and Startups as recognized by Department of Industrial Policy & Promotion (DIPP). (MSE/MSME/DIPP PROOF should be enclosed in the cover containing technical bid).</p> |

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| 10) | <p>Performance Security: -</p> <p>The successful bidder should submit Performance Security for an amount of 3% of the value of the contract/supply. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt in the name of “The Registrar, IIT Madras” from any scheduled commercial bank or Bank Guarantee from any scheduled commercial bank in India. The performance security should be furnished within 14 days from the date of the purchase order.</p> <p>Performance Security in the form of Bank Guarantee: - In case the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed directly to IIT Madras from the Bank.</p> <p>The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.</p> |
| 11) | For the same tender, either the OEM or the authorized dealer/service provider can only quote. But both of them cannot quote separately for the same tender. |
| 12) | The offers/bids should be sent only for a item/Equipments of latest version that is available in the market and supplied to a number of customers. A list of customers in India with details must accompany the quotations. Quotations for a prototype machine will not be accepted |
| 13) | Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. |
| 14) | Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal/OEM. |
| 15) | <p>Risk Purchase Clause</p> <p>In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.</p> |
| 16) | <p>Payment:</p> <p>(i) No Advance payment will be made. However, 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved.</p> <p>(ii) Advance Payment: No advance payment is generally admissible. In case a specific percentage of advance payment is required, the Vendor has to submit a Bank Guarantee from a scheduled commercial bank in India equivalent to the amount of advance payment.</p> |
| 17) | <p>On-site Installation:</p> <p>The equipment/item or Machinery has to be installed or commissioned by the successful bidder within the number of days (as prescribed by PI) from the date of receipt of the item at the site of IIT Madras.</p> |
| 18) | <p>Warranty/Guarantee:</p> <p>The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately (For more details please refer our Technical Specifications).</p> <p>** Note: PO which involves installation, warranty/guarantee shall be applicable from date of installation.</p> |
| 19) | <p>Acceptance and Rejection:</p> <p>Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for non-compliance will likely to lead to rejection of offers.</p> <p>I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the</p> |

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| | quantity offered or reject it in full without assigning any reason. |
| 20) | <p>Debarment from Bidding:</p> <p>In case of breach of Terms & Conditions, Bidder may be suspended from being eligible for bidding in any contract with the IIT Madras up to 2 Years [as per Rule 151(iii) of GFR] from the date of Tender.</p> |
| 21) | <p>Disputes and Jurisdiction:</p> <p>Settlement of Disputes: Any dispute, controversy or claim arising out of or in connection with this PO including any question regarding its existence, validity, breach or termination, shall in the first instance be attempted to be resolved amicably by both the Parties. If attempts for such amicable resolution fails or no decision is reached within 30 days whichever is earlier, then such disputes shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996. Unless the Parties agree on a sole arbitrator, within 30 days from the receipt of a written request by one Party from the other Party to so agree, the arbitral panel shall comprise of three arbitrators. In that event, the supplier will nominate one arbitrator and the Project Coordinator of IITM shall nominate an arbitrator. The Dean IC&SR will nominate the Presiding Arbitrator of the arbitral tribunal. The arbitration proceeding shall be carried out in English language. The cost of arbitration and fees of the arbitrator(s) shall be shared equally by the Parties. The seat of arbitration shall be at IC&SR IIT Madras, Chennai.</p> <p>a. The Applicable Law: The Purchase Order shall be construed, interpreted and governed by the Laws of India. Court at Chennai shall have exclusive jurisdiction subject to the arbitration clause.</p> <p>b. Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.</p> |
| 22) | <p>Force Majeure: The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <p>For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.</p> <p>If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.</p> |
| 23) | <p>Eligibility Criteria:</p> <ul style="list-style-type: none"> ➤ As per the Government of India Order, only "Class - I Local Suppliers" and "Class - II Local Suppliers" <u>can participate in this tender.</u> ➤ <u>Bidder should confirm their acceptance that they comply with the provisions with report to "Guidelines for eligibility of a bidder from a country which shares a land border with India as detailed at Annexure-F. The bidder should submit Certificate for "Bidder from/ Not from Country sharing Land border with India & Registration of Bidder with Competent Authority" as per Order of DoE F.No.6/18/2019-PPD dated 23.07.2020 as mentioned.</u> |
| 24) | <p>Preference to "class I Local Suppliers": preference will be given to "class 1 local suppliers" (subject to class -I local supplier's quoted price falling within the margin of purchase preference) as per public procurement (preference to make in India) order 2017 .O.M No P- 45021/2/2017 – pp(BE - 11) dt 04/06/2020 subject to the conditions that the "class 1 Local Supplier" should agree to supply goods /</p> |

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| | <p>provide service at L1 rate and furnish a certificate with the technical bid document that the goods/service provided by them consists local content equal to or more than 50%.(certificate from Chartered Accountant in case value of contract exceeds Rs 10 crore).</p> <ul style="list-style-type: none"> ➤ ‘Class - I local supplier’ means a supplier or service provider whose goods, services or works offered for procurement consists of local content equal to or more than 50% as defined under the above said order. Declaration to be provided as per Annexure-II per item/service/work. ➤ ‘Class - II local supplier’ means a supplier or service provider whose goods, services or works offered for procurement consists of local content equal to 20% but less than 50% as defined under the above said order. Declaration to be provided as per Annexure-II per item/service/work. ➤ ‘Margin of purchase preference’: - The margin of purchase preference shall be 20%. The Definition of the margin of purchase preference is defined in the Govt. of India Order No: P-45021/12/2017-PP (BE-II) Dt.4th June, 2020) Order 2017. As per the Government of India Order – “Margin of Purchase Preference” means the maximum extent to which the price quoted by a “Class-I local supplier” may be above the L1 for the purpose of purchase preference. <p>**Note: Local content percentage to be calculated in accordance with the definition provided at clause 2 of revised public procurement preference to Make in India Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020) MOCI order No. 45021/2/2017-PP (BE II) Dt.16th September 2020 & P-45021/102/2019-BE-II-Part(1) (E-50310) Dt.4th March 2021</p> |
| 25) | <p>Evaluation of Bids</p> <p>Bid evaluation will take place in two stages.</p> <p>Stage I Technical Bid evaluation</p> <p>All bidders who have fully complied with bidder eligibility criteria I, II and technical evaluation (Annexure A) will only be considered for opening of price bid.</p> <p>Stage II: Price Bid Evaluation</p> <p>The price bid evaluation will be based on price quoted by the bidder. The rate quoted for “Glovebox Workstation to fabricate LEDs” unit will alone be taken up for arrival of Lowest Bid (L1) value.</p> |
| 26) | <p>Selection of successful bidder and Award of Order</p> <p>The order will be directly awarded to the technically qualified bidder as per the condition in para 3A of DIPP, MoCI Order No. 45021/2/2017-PP (BE II) dated 16th September 2020.</p> |
| 27) | <p>All information including selection and rejection of technical or financial bids of the prospective bidders will be communicated through e-Tender portal. In terms of Rule 173(iv) of General Financial Rule 2017, the bidder shall be at liberty to question the bidding conditions, bidding process and/or rejection of bids.</p> |
| 28) | <p>The tenderer shall certify that the tender document submitted by him / her are of the same replica of the tender document as published by IIT Madras and no corrections, additions and alterations made to the same. If any deviation found in the same at any stage and date, the bid / contract will be rejected / terminated and actions will be initiated as per the terms and conditions of the contract.</p> |
| 29) | <p>Due to Covid-19 pandemic pre-bid meeting will be conducted through online. Clarification to the queries and doubts raised by the bidders will be issued as a corrigendum/addendum in the e-tenders portal.</p> |
| 30) | <p>Due to Covid-19 pandemic the bidders will not be entertained to participate in opening of Bids. Since the tender is e-tender, the opening of the bids may be checked using the respective logins of the bidders.</p> |

ACKNOWLEDGEMENT

It is hereby acknowledged that I/We have gone through all the points listed under “Specification, Guidelines, Terms and Conditions” of tender document. I/We totally understand the terms and conditions and agree to abide by the same.

**SIGNATURE OF TENDERER ALONG WITH SEAL OF
THE COMPANY WITH DATE**

Bidder Eligibility Criteria and Technical Specification for “Glovebox Workstation to fabricate LEDs”

Tender No.PH/JAYE/02/IOE23/GLOWTOFAB

Bidder Eligibility Criteria – I (Public Procurement – Preference to Make in India)

Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE-II) dated 16th September 2020 and other subsequent orders issued therein.

Bidder Eligibility Criteria-II

1. The OEM/Bidder must have supplied ‘Gloveboxes’ (atleast 25 in number) and ‘Glovebox integrated thermal evaporator’ (5 in number) especially in national labs/institutes (IITs, NISER/IISERs, CSIR labs etc) and should have satisfactory running of the system at respective installation in last 5 years. certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation
2. The service center should be within Chennai, Tamilnadu. Proof of facility registration, location & contact details to be provided along with technical bid.
3. Certificate Required from Manufacturer along with the equipment supply: ISO, CE & Class- I Tightness Certificate to be provided.

III. Technical Specification For “Glovebox Workstation to fabricate LEDs”

| SNO | SPECIFICATION |
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| | Basic Configuration |
| 1 | The workstation would have two glove boxes depicted with two working zones, i.e. wet zone and dry zone with 4 ports for each zone glove box. The boxes should comply with the specifications below. |
| 2 | The workstation in the wet zone would basically consist of one sided glovebox with spincoater (specification given below) and a gas purification system intended to provide moisture and oxygen free environment upto 0.1 ppm. This is to be used with nitrogen gas. |
| 3 | The workstation in the dry zone would basically consist of one sided glovebox with integrated thermal evaporator (specification given below) and a gas purification system intended to provide moisture and oxygen free environment upto 0.1 ppm. This is to be used with nitrogen gas. |
| 4 | The workstation should be designed in a way that each of the boxes/zones are connected by a T-shaped Antechamber as per the specification below. |
| 5 | Both the boxes in the workstation should be designed such that each zone can work independently and shall have its own pressure regulation. It should also be possible to isolate the boxes and the purifications at any given time. |
| a) | Specification for Wet zone glove box |
| | Minimum box dimensions atleast: 1800 width x 900 height x 725 depth [in mm] |
| | Glove box should be modular and expandable with bolted side panels with O-ring. |
| | 4 pcs. gloveport feedthrough; round, d=220 mm including the gloves (Butyl rubber, 0.4 mm thick, size L). One complete set of gloves and an additional spare set of gloves should be supplied during the installation |
| | Leak rate < 0.05 Vol %/h or lower (Class I glove box according to International Standards ISO 10648-2) |
| | Stainless steel make structure with 1000 mm stand including castors and adjustable height. |
| | Front Window: Glass Window or Polycarbonate with additional sapphire coating (upto 10mm) for chemical & Scratch resistance |
| | Dust filter 0.3 micron, class H13 should be included in the work station (2 nos for this box) |

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| | Stainless Steel sliding shelves (3 Nos) should to be included in the work station. |
| | Automatic Box pressure range ± 15 mbar |
| | Automatic positive pressure regulation system without vacuum pump should be possible. |
| | Mini Antechamber with dimension of 150 mm Dia x 300 mm length with hinged cover inside and outside. Operation: manual, 3-way valve and fitted with analog vacuum gauge. Should have a stainless steel sliding tray for sample transfer. |
| | Spincoater integrated into the basefloor of the glove box with the cut-through cabin. Full specification of spincoater is below. |
| | Glove box should have 5 DN 40 feed through, one should be electrical for powering appliances inside the box |
| | Fluorescent lamp or appropriate lighting should be front mounted |
| b) | Specification for Dry zone glove box |
| | Minimum box dimensions atleast: 1800 width x 900 height x 725 depth [in mm] |
| | Glove box should be modular and expandable with bolted side panels. |
| | 4 pcs. gloveport feedthrough; round, d=220 mm including the gloves (Butyl rubber, 0.4 mm thick, size L). One complete set of gloves and an additional spare set of gloves should be supplied during the installation |
| | Leak rate < 0.05 Vol %/h or lower (Class I glove box according to International Standards ISO 10648-2) |
| | Stainless steel make structure with 1000 mm stand including castors and adjustable height. |
| | Front Window Polycarbonate with additional sapphire coating (upto 10mm) for chemical & Scratch resistance |
| | Dust filter 0.3 micron, class H13 should be included in the work station (2 nos for this box) |
| | Stainless Steel sliding shelves (3 Nos) should to be included in the work station. |
| | Automatic Box pressure range ± 15 mbar |
| | Automatic positive pressure regulation system without vacuum pump should be possible. |
| | Mini Antechamber with dimension of 150 mm Dia x 300 mm length with hinged cover inside and outside. Operation: manual, 3-way valve and fitted with analog vacuum gauge. Should have a stainless steel sliding tray for sample transfer. |
| | Glove box should have 5 DN 40 feed through, one should be electrical for powering appliances inside the box |
| | Fluorescent lamp or appropriate lighting should be front mounted with automatic auto off facility |
| | A quartz window of 100mm x 100 mm should be provided at the floor/side of the glovebox for optical integration (not included). |
| | PVD-system should be integrated into the Dry zone glove box (full specification of PVD system is given below). |
| c) | Gas purification System |
| | PLC/HMI Controller with Color Touch panel for all operation including remote monitoring of glove box parameters including sending alerts and maintenance notifications. |
| | PLC controlled purification system having capacity for oxygen removal of greater than 36L and Moisture removal of 1300g or more. |
| | Re-generable filters for gas purification. |
| | Should maintain purity < 1ppm H ₂ O and O ₂ (at complete pressure range) |
| | •Automatic PLC controlled regeneration sequence with nitrogen N ₂ /Argon and Hydrogen (5-10%) |
| | Circulation unit should be fitted with a blower of speed which reaches atleast 85 to 120m ³ /hour speed or more |
| | Blower speed reduction or increase, as per O ₂ and H ₂ O level |
| | Two stage oil sealed Rotary vane vacuum pump with max flow rate better than 17 m ³ /h for ante chamber evacuation operations of the glove box should be provided. |
| | The rotary pump should have oil mist filter, Oil re-circulation (Gas Ballast) |
| | Exhaust -Combined gas purge outlet from the gas purification system, regeneration gas outlet vacuum pump outlet and Glass Bottle for regeneration gas |
| | Positive Pressure regulation without vacuum pump should be possible. |
| | Activation of above features should be possible at user's Set Time. |
| | Excess gas discharge should be possible even during the power failure. |
| | Low noise level while operation and eco mode to switch off vacuum pump in idle situation. |
| | Appropriate heat exchanger if required should be provided with the system. |
| | Main purifier valves should be of electro-pneumatic or electro-valve |
| | Purificationsystem can be 2 Nos, one for each glove box. OR Can be one number with higher volume. |
| d) | Purging Mechanism |

| | |
|----|--|
| | Purging to be automatically activated, when the Oxygen in the glove box is exceeded, able to set point (10-999ppm) and continuously purging till the set point is reached and automatically start the circulation of the gas purifier. |
| | Automatic and adjustable mechanism for regular gas purge with time, duration and the day. |
| | Glove box purging to be operated by the operational panel of the purifier up to 150 l/min with PLC control as well as manual regulation valve |
| e) | Box Piping (as per the requirement) |
| | All the piping should be stainless steel. |
| | The piping should be connected in a way to allow operation such as GB1 and GB2 are in common gas circulation ("AND") (b) GB1 or GB2 in alternate gas circulation ("OR") |
| | The piping should allow isolation of wet zone glove box from the dry zone glove box if required through a manual valve. |
| f) | T-Shaped Ante Chamber (One in between the wet and dry zone glove boxes) |
| | This is to interconnect the two Gloveboxes. |
| | It shall have three vacuum doors (one each towards both the boxes and another for accessibility towards outside). |
| | The doors shall be of swing-type mechanism. |
| | Should also be equipped with a 3-way valve to control refilling and evacuation. |
| | The Purge-In & Vacuum process can be programmed on HMI/PLC and shall be automatic. |
| | Appropriate sliding tray on telescopic rails made up of stainless steel should be provided to facilitate sample transfer within the wet zone glove box and dry zone glove boxes as well as between the Glovebox to Ambient. |
| | Easy opening and maintenance of the doors of the T-shaped Ante-chamber |
| | Minimum dimension 390 x 800 mm or more |
| g) | Sensors (one for each glove box) |
| | Oxygen Sensor (1 per each box/zone): |
| | PLC controlled |
| | Inline positioned |
| | Measuring range: 0-1000 ppm |
| | Resolution better than 1 ppm |
| | Should be free from frequent calibration |
| | Moisture Sensor (1 per each box/zone): |
| | PLC controlled and solid state sensor |
| | Inline positioned |
| | Measuring range: 0-500 ppm |
| | Resolution better than 1 ppm |
| | Should be free from frequent calibration |
| h) | Solvent Adsorption Unit (At least one for the wet zone glove box) |
| | Suitable activated charcoal based solvent adsorbing material of atleast 5 kgs should be integrated into the glove box to allow the use of organic solvents in the box. |
| | Inline circulation for continuous solvent removal. |
| | Capability to bypass with manual hand valves so that the adsorption unit can be removed from circulation |
| | Appropriate back connection or bypass valve for easy replacement, swapping and transfer of the adsorption unit. |
| i) | Spin coating Unit (to be integrated in the wet zone glove box) |
| | In deck integration at the floor level of the glove box and not table top |
| | For substrate size from 1 cm ² to 4 inch x 4 inch |
| | User friendly programming panel placed inside/outside the glovebox. (Inside Preferred) |
| | At least one ON/OFF control for the spin coater should be provided inside the glove box. |
| | Transparent Lid for the spin coater. |
| | The bowl of the spin coater and the lids should be resistant to common solvents |

| | |
|----|---|
| | Substrate fixation by vacuum with safety interlock. Appropriate connection for vacuum should be provided. |
| | Speed: 0 to 8000 rpm or higher |
| | Acceleration: 100 to 10000 rpm |
| | At least 3 chucks with different sizes of orifice for for substrate vacuum fixation to be included. |
| 3 | Specification of thermal evaporator |
| | A thermal evaporator (PVD system) integrated with the dry zone glove box for preparation of thin films of metal contacts and also co-evaporation of organic molecules with the following specifications: |
| | PVD-System for the physical vapor deposition of materials under high vacuum conditions, integrated into dryzone glovebox. |
| | Vacuum chamber: |
| | Maximum substrate size should be 100 x 100 mm or Ø100 mm. |
| | Volume: equal or greater than 60 L. |
| | Material: Stainless steel including liner shielding. |
| | Prepared for rotational substrate stage. |
| | Should have interlock. |
| | Vacuum Pump stack: |
| | 1 pc. high vacuum turbo molecular pump with more than 260 l/s pumping speed (N ₂); incl. controller. |
| | 1 pc. Pre-vacuum rotary vane pump (oil sealed; 2-stage) with up to 14 m ³ /h nominal pumping speed. |
| | 1 pc. full range high vacuum measurement system (PIRANI and PENNING vacuum-gauge head) metering range: atmospheric pressure to 5x10 ⁻⁹ mbar. |
| | Low Temperature Evaporator: |
| | Low temperature evaporator for co-deposition of organic molecules. |
| | Alumina crucible source with upto 4ccm volume. |
| | - temperature range: 50°C-800°C |
| | - temperature stability +/- 0.1 K |
| | - thermocouple: type K |
| | - should incl. power supply and PID control |
| | - should incl. power and signal feedthrough |
| | - should incl. water cooled source base |
| | High temperature evaporator: |
| | For coating Al, Ag, Au etc |
| | - Type: Double resistance boat-type |
| | - Temperature range: up to 1700°C |
| | - installed on water cooled source base |
| | - incl. power supply (0-15 V, 0-200 A, max. 2 kVA) |
| v) | Rate Sensor head: |
| | Should include 3 nos sensors made from quartz crystal microbalance.(5 or 6 MHz) water-cooled and should include oscillator, feedthrough from base plate. |
| | Evaporation rate controller: |
| | Thin Film Deposition Controller including mechanical and software integration for accurate control of deposition rate and film thickness.Should have thickness resolution: 0.15 Å @ 4 readings/sec Minimum Rate reading: minimum of 0.037Å/sec Co-deposition: yes with up to 4 films simultaneously Interfaces: RS-232 and USB standard and software included. |
| | Shutters: Source shutters for both Low temp and high temp should be installed, along with the substrate shutter. |
| | Substrate rotation for uniform thickness with the maximum speed upto 30 rpm. |
| | Integration of Thermal evaporation with the glovebox should be from the supplier. |
| 4 | Accessories to be provided |

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|---|---|
| | Dummy to be used during the replacement of gloves of the glovebox should be provided |
| | Copper catalyst and Charcoal amount required for one replacement should be provided |
| | Test boats and crucibles are required to provide during installation |
| 5 | Quartz Window: |
| | A quartz window integrated to the box floor with the minimum size of 50 mm x 50 mm. |
| 6 | Additional Conditions: |
| | Complete installation of the setup and/or appropriate co-ordination with the thermal evaporator vendor, (if it is from different supplier) to allow integration of the thermal evaporator at installation site. |
| | Glove box, Purification System and deposition should be provided with related ISO certificate and other certification of international standard. |
| | Vendors are required to provide brochures / literature while complying the specifications. |
| | Upgrade options should be readily available and should be quoted with full information. |
| | Detailed printed manual with all the specification should be provided. |
| | No Silicon Sealing allowed for front or side panel. |
| | Calibration Certificate for Sensors traceable to International Standards to be provided |
| | Warranty: 3 years or more |

TECHNICAL BID PROFORMA

Tender No. PH/JAYE/02/IOE23/GLOWTOFAB

Item Name: "Glovebox Workstation to fabricate LEDs"

Bidder Eligibility Criteria:

| 1.0 | Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India) | Class I / Class II | Local Content value | Reference, Page No. |
|-----|--|-----------------------|---------------------------|------------------------|
| I | Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 th September 2020 and other subsequent orders issued therein. | | | |

Bidder Eligibility Criteria-II

| 2.0 | Bidder Eligibility Criteria | Complied/Not Complied | Ref, Page No. |
|-----|--|--------------------------|------------------|
| 1 | The OEM/Bidder must have supplied 'Gloveboxes' (atleast 25 in number) and 'Glovebox integrated thermal evaporator' (5 in number) especially in national labs/institutes (IITs, NISER/IISERs, CSIR labs etc) and should have satisfactory running of the system at respective installation in last 5 years. certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation | | |
| 2 | The service center should be within Chennai, Tamilnadu. Proof of facility registration, location & contact details to be provided along with technical bid | | |
| 3 | Certificate Required from Manufacturer along with the equipment supply: ISO, CE & Class- I Tightness Certificate to be provided. | | |

3.0 Technical Compliance:

| S.No | SPECIFICATION | Complied/N ot Complied | Ref, Page No. |
|----------------------------|---|---------------------------|------------------|
| Basic Configuration | | | |
| 1 | The workstation would have two glove boxes depicted with two working zones, i.e. wet zone and dry zone with 4 ports for each zone glove box. The boxes should comply with the specifications below. | | |
| 2 | The workstation in the wet zone would basically consist of one sided glovebox with spincoater (specification given below) and a gas purification system intended to provide moisture and oxygen free environment upto 0.1 ppm. This is to be used with nitrogen gas. | | |
| 3 | The workstation in the dry zone would basically consist of one sided glovebox with integrated thermal evaporator (specification given below) and a gas purification system intended to provide moisture and oxygen free environment upto 0.1 ppm. This is to be used with nitrogen gas. | | |
| 4 | The workstation should be designed in a way that each of the boxes/zones are connected by a T-shaped Antechamber as per the | | |

| | | | |
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| | specification below. | | |
| 5 | Both the boxes in the workstation should be designed such that each zone can work independently and shall have its own pressure regulation. It should also be possible to isolate the boxes and the purifications at any given time. | | |
| a)Specification for Wet zone glove box | | | |
| | Minimum box dimensions atleast: 1800 width x 900 height x 725 depth [in mm] | | |
| | Glove box should be modular and expandable with bolted side panels with O-ring. | | |
| | 4 pcs. gloveport feedthrough; round, d=220 mm including the gloves (Butyl rubber, 0.4 mm thick, size L). One complete set of gloves and an additional spare set of gloves should be supplied during the installation | | |
| | Leak rate < 0.05 Vol %/h or lower (Class I glove box according to International Standards ISO 10648-2) | | |
| | Stainless steel make structure with 1000 mm stand including castors and adjustable height. | | |
| | Front Window: Glass Window or Polycarbonate with additional sapphire coating (upto 10mm) for chemical & Scratch resistance | | |
| | Dust filter 0.3 micron, class H13 should be included in the work station (2 nos for this box) | | |
| | Stainless Steel sliding shelves (3 Nos) should to be included in the work station. | | |
| | Automatic Box pressure range ± 15 mbar | | |
| | Automatic positive pressure regulation system without vacuum pump should be possible. | | |
| | Mini Antechamber with dimension of 150 mm Dia x 300 mm length with hinged cover inside and outside. Operation: manual, 3-way valve and fitted with analog vacuum gauge. Should have a stainless steel sliding tray for sample transfer. | | |
| | Spincoater integrated into the basefloor of the glove box with the cut-through cabin. Full specification of spincoater is below. | | |
| | Glove box should have 5 DN 40 feed through, one should be electrical for powering appliances inside the box | | |
| | Fluorescent lamp or appropriate lighting should be front mounted | | |
| b)Specification for Dry zone glove box | | | |
| | Minimum box dimensions atleast: 1800 width x 900 height x 725 depth [in mm] | | |
| | Glove box should be modular and expandable with bolted side panels. | | |
| | 4 pcs. gloveport feedthrough; round, d=220 mm including the gloves (Butyl rubber, 0.4 mm thick, size L). One complete set of gloves and an additional spare set of gloves should be supplied during the installation | | |
| | Leak rate < 0.05 Vol %/h or lower (Class I glove box according to International Standards ISO 10648-2) | | |
| | Stainless steel make structure with 1000 mm stand including castors and adjustable height. | | |
| | Front Window Polycarbonate with additional sapphire coating (upto 10mm) for chemical & Scratch resistance | | |
| | Dust filter 0.3 micron, class H13 should be included in the work station (2 nos for this box) | | |
| | Stainless Steel sliding shelves (3 Nos) should to be included in the work station. | | |
| | Automatic Box pressure range ± 15 mbar | | |
| | Automatic positive pressure regulation system without vacuum pump should be possible. | | |

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| | Mini Antechamber with dimension of 150 mm Dia x 300 mm length with hinged cover inside and outside. Operation: manual, 3-way valve and fitted with analog vacuum gauge. Should have a stainless steel sliding tray for sample transfer. | | |
| | Glove box should have 5 DN 40 feed through, one should be electrical for powering appliances inside the box | | |
| | Fluorescent lamp or appropriate lighting should be front mounted with automatic auto off facility | | |
| | A quartz window of 100mm x 100 mm should be provided at the floor/side of the glovebox for optical integration (not included). | | |
| | PVD-system should be integrated into the Dry zone glove box (full specification of PVD system is given below). | | |
| c)Gas purification System | | | |
| | PLC/HMI Controller with Color Touch panel for all operation including remote monitoring of glove box parameters including sending alerts and maintenance notifications. | | |
| | PLC controlled purification systemhaving capacity for oxygen removal of greater than 36L and Moisture removal of 1300g or more. | | |
| | Re-generable filters for gas purification. | | |
| | Should maintain purity < 1ppm H2O and O2 (at complete pressure range) | | |
| | •Automatic PLC controlled regeneration sequence with nitrogen N2 /Argon and Hydrogen (5-10%) | | |
| | Circulation unit should be fitted with a blower of speed which reaches atleast 85 to 120m3/hour speed or more | | |
| | Blower speed reduction or increase, as per O2 and H2O level | | |
| | Two stage oil sealed Rotary vane vacuum pump with max flow rate better than 17 m3/h for ante chamber evacuation operations of the glove box should be provided. | | |
| | The rotary pump should have oil mist filter, Oil re-circulation (Gas Ballast) | | |
| | Exhaust -Combined gas purge outlet from the gas purification system, regeneration gas outlet vacuum pump outlet and Glass Bottle for regeneration gas | | |
| | Positive Pressure regulation without vacuum pump should be possible. | | |
| | Activation of above features should be possible at user's Set Time. | | |
| | Excess gas discharge should be possible even during the power failure. | | |
| | Low noise level while operation and eco mode to switch off vacuum pump in idle situation. | | |
| | Appropriate heat exchanger if required should be provided with the system. | | |
| | Main purifier valves should be of electro-pneumatic or electro-valve | | |
| | Purificationsystem can be 2 Nos, one for each glove box. OR Can be one number with higher volume. | | |
| d)Purging Mechanism | | | |
| | Purging to be automatically activated, when the Oxygen in the glove box is exceeded, able to set point (10-999ppm) and continuously purging till the set point is reached and automatically start the circulation of the gas purifier. | | |
| | Automatic and adjustable mechanism for regular gas purge with time, duration and the day. | | |
| | Glove box purging to be operated by the operational panel of the purifier up to 150 l/min with PLC control as well as manual regulation valve | | |
| e)Box Piping (as per the requirement) | | | |

| | | | |
|--|---|--|--|
| | All the piping should be stainless steel. | | |
| | The piping should be connected in a way to allow operation such as GB1 and GB2 are in common gas circulation ("AND") (b) GB1 or GB2 in alternate gas circulation ("OR") | | |
| | The piping should allow isolation of wet zone glove box from the dry zone glove box if required through a manual valve. | | |
| f)T-Shaped Ante Chamber (One in between the wet and dry zone glove boxes) | | | |
| | This is to interconnect the two Gloveboxes. | | |
| | It shall have three vacuum doors (one each towards both the boxes and another for accessibility towards outside). | | |
| | The doors shall be of swing-type mechanism. | | |
| | Should also be equipped with a 3-way valve to control refilling and evacuation. | | |
| | The Purge-In & Vacuum process can be programmed on HMI/PLC and shall be automatic. | | |
| | Appropriate sliding tray on telescopic rails made up of stainless steel should be provided to facilitate sample transfer within the wet zone glove box and dry zone glove boxes as well as between the Glovebox to Ambient. | | |
| | Easy opening and maintenance of the doors of the T-shaped Ante-chamber | | |
| | Minimum dimension 390 x 800 mm or more | | |
| g)Sensors (one for each glove box) | | | |
| | Oxygen Sensor (1 per each box/zone): | | |
| | PLC controlled | | |
| | Inline positioned | | |
| | Measuring range: 0-1000 ppm | | |
| | Resolution better than 1 ppm | | |
| | Should be free from frequent calibration | | |
| | Moisture Sensor (1 per each box/zone): | | |
| | PLC controlled and solid state sensor | | |
| | Inline positioned | | |
| | Measuring range: 0-500 ppm | | |
| | Resolution better than 1 ppm | | |
| | Should be free from frequent calibration | | |
| h)Solvent Adsorption Unit (At least one for the wet zone glove box) | | | |
| | Suitable activated charcoal based solvent adsorbing material of atleast 5 kgs should be integrated into the glove box to allow the use of organic solvents in the box. | | |
| | Inline circulation for continuous solvent removal. | | |
| | Capability to bypass with manual hand valves so that the adsorption unit can be removed from circulation | | |
| | Appropriate back connection or bypass valve for easy replacement, swapping and transfer of the adsorption unit. | | |
| i)Spin coating Unit (to be integrated in the wet zone glove box) | | | |
| | In deck integration at the floor level of the glove box and not table top | | |
| | For substrate size from 1 cm ² to 4 inch x 4 inch | | |
| | User friendly programming panel placed inside/outside the glovebox. (Inside Preferred) | | |
| | At least one ON/OFF control for the spin coater should be provided inside the glove box. | | |
| | Transparent Lid for the spin coater. | | |
| | The bowl of the spin coater and the lids should be resistant to common solvents | | |
| | Substrate fixation by vacuum with safety interlock. Appropriate | | |

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| | connection for vacuum should be provided. | | |
| | Speed: 0 to 8000 rpm or higher | | |
| | Acceleration: 100 to 10000 rpm | | |
| | At least 3 chucks with different sizes of orifice for for substrate vacuum fixation to be included. | | |
| Specification of thermal evaporator | | | |
| | A thermal evaporator (PVD system) integrated with the dry zone glove box for preparation of thin films of metal contacts and also co-evaporation of organic molecules with the following specifications: | | |
| | PVD-System for the physical vapor deposition of materials under high vacuum conditions, integrated into dryzone glovebox. | | |
| | Vacuum chamber: | | |
| | Maximum substrate size should be 100 x 100 mm or Ø100 mm. | | |
| | Volume: equal or greater than 60 L. | | |
| | Material: Stainless steel including liner shielding. | | |
| | Prepared for rotational substrate stage. | | |
| | Should have interlock. | | |
| Vacuum Pump stack: | | | |
| | 1 pc. high vacuum turbo molecular pump with more than 260 l/s pumping speed (N ₂); incl. controller. | | |
| | 1 pc. Pre-vacuum rotary vane pump (oil sealed; 2-stage) with up to 14 m ³ /h nominal pumping speed. | | |
| | 1 pc. full range high vacuum measurement system (PIRANI and PENNING vacuum-gauge head) metering range: atmospheric pressure to 5x10 ⁻⁹ mbar. | | |
| Low Temperature Evaporator: | | | |
| | Low temperature evaporator for co-deposition of organic molecules. | | |
| | Alumina crucible source with upto 4ccm volume. | | |
| | - temperature range: 50°C-800°C | | |
| | - temperature stability +/- 0.1 K | | |
| | - thermocouple: type K | | |
| | - should incl. power supply and PID control | | |
| | - should incl. power and signal feedthrough | | |
| | - should incl. water cooled source base | | |
| High temperature evaporator: | | | |
| | For coating Al, Ag, Au etc | | |
| | - Type: Double resistance boat-type | | |
| | - Temperature range: up to 1700°C | | |
| | - installed on water cooled source base | | |
| | - incl. power supply (0-15 V, 0-200 A, max. 2 kVA) | | |
| v)Rate Sensor head: | | | |
| | Should include 3 nos sensors made from quartz crystal microbalance.(5 or 6 MHz) water-cooled and should include oscillator, feedthrough from base plate. | | |
| Evaporation rate controller: | | | |
| | Thin Film Deposition Controller including mechanical and software integration for accurate control of deposition rate and film thickness.Should have thickness resolution: 0.15 Å @ 4 readings/sec Minimum Rate reading: minimum of 0.037Å/sec Co-deposition: yes with up to 4 films simultaneously Interfaces: RS-232 and USB standard and software included. | | |
| | Shutters: Source shutters for both Low temp and high temp should be installed, along with the substrate shutter. | | |
| | Substrate rotation for uniform thickness with the maximum speed upto 30 rpm. | | |

| | | | |
|-------------------------------------|---|--|--|
| | Integration of Thermal evaporation with the glovebox should be from the supplier. | | |
| 4.Accessories to be provided | | | |
| | Dummy to be used during the replacement of gloves of the glovebox should be provided | | |
| | Copper catalyst and Charcoal amount required for one replacement should be provided | | |
| | Test boats and crucibles are required to provide during installation | | |
| 5.Quartz Window: | | | |
| | A quartz window integrated to the box floor with the minimum size of 50 mm x 50 mm. | | |
| 6.Additional Conditions: | | | |
| | Complete installation of the setup and/or appropriate co-ordination with the thermal evaporator vendor, (if it is from different supplier) to allow integration of the thermal evaporator at installation site. | | |
| | Glove box, Purification System and deposition should be provided with related ISO certificate and other certification of international standard. | | |
| | Vendors are required to provide brochures / literature while complying the specifications. | | |
| | Upgrade options should be readily available and should be quoted with full information. | | |
| | Detailed printed manual with all the specification should be provided. | | |
| | No Silicon Sealing allowed for front or side panel. | | |
| | Calibration Certificate for Sensors traceable to International Standards to be provided | | |
| | Warranty: 3 years or more | | |

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the above points with document proof as required. Failing which bidders will be technically disqualified)

**SIGNATURE OF BIDDER ALONG WITH
SEAL OF THE COMPANY WITH DATE**

FINANCIAL BID (PROFORMA) - BILL OF QUANTITIES (BOQ)**Item Name: "Glovebox Workstation to fabricate LEDs"****Tender No. PH/JAYE/02/IOE23/GLOWTOFAB**

| It. No | Description of work | Quantity | Units | Basic Rate in INR | GST in Percentage | Total Amount with taxes in INR |
|-------------|---|----------|-------|-------------------|-------------------|--------------------------------|
| 1 | Glovebox Workstation to fabricate LEDs With 3 years Warranty | 1 | Nos. | | | |
| Grand Total | | | | | | |

Total Amount Rupees in words _____



CENTRE FOR INDUSTRIAL CONSULTANCY & SPONSORED RESEARCH (IC&SR)
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI 600 036



ELECTRONIC CLEARING SERVICE (Credit Clearing)/ REAL TIME GROSS SETTLEMENT (RTGS) FACILITY FOR RECEIVING PAYMENTS

A. Details of Account Holder

| | |
|---------------------------------|---|
| Name of the Institution | Indian Institute of Technology - Madras |
| Complete Contact Address | Industrial Consultancy and Sponsored Research Indian Institute of Technology-Madras, IIT- Madras Campus Post Office, Sardar Patel Road, Guindy, CHENNAI - 600 036 |
| Telephone No./ Fax No. | Tel - 044-2257 8356 |
| E- mail ID of the FO/AO/REG/DIR | dricsr@iitm.ac.in |

B. Bank Account Details:

| | |
|---|--|
| Institution Account Name (As per Bank Record) | The Registrar, Indian Institute of Technology - Madras |
| Account No. | 2722101003872 |
| Account Print Name | IIT F A/C , The Registrar IIT Madras |
| IFSC CODE | CNRB0002722 |
| Bank Name (in full) | Canara Bank |
| Branch Name | IIT-Madras Branch |
| Complete Branch Address | Canara Bank, IIT-Madras Branch, IIT- Madras Campus Post Office, Sardar Patel Road, Guindy, CHENNAI - 600 036 |
| MICR No. | 600015085 |
| Account Type | Savings Account |

Certified that the Institute's account is in an RTGS enabled branch.

I hereby declare that the particulars given above are correct and complete.

Date:

Signature of the Competent Authority
of the Institution with seal.

FORMAT FOR AFFIDAVIT OF SELF-CERTIFICATION UNDER PREFERENCE TO MAKE IN INDIA – PER ITEM

Tender Reference Number:

Name of the item / Service:

Date: _____
I/We _____ S/o, D/o, W/o, _____
Resident of _____

Hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020) MOCI order No. 45021/2/2017-PP (BE II) Dt.16th September 2020 & P- 45021/102/2019-BE-II-Part (1) (E-50310) Dt.4th March 2021 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said item/service/work has been verified by me and I am responsible for the correctness of the claims made therein.

| Tick (✓) and Fill the Appropriate Category | |
|---|--|
| <input type="checkbox"/> | I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 50% and come under “ Class-I Local Supplier ” category. |
| <input type="checkbox"/> | I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to 20% but less than 50% and come under “ Class-II Local Supplier ” category. |

- The details of the location (s) at which the local value addition is made and the proportionate value of local content in percentage

Address _____ Percentage of Local content: _____%

For and on behalf of (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)
<Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

This letter should be on the letterhead of the quoting firm and should be signed by a competent authority. Non-submission of this will lead to Disqualification of bids.

(To be given on the letter head of the bidder)

No. _____

Dated: _____

CERTIFICATE

(Bidders from India)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I am not from such a country.

OR (*whichever is applicable*)

(Bidders from Country which shares a land border with India)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I from _____ (Name of Country) and has been registered with the Competent Authority. I also certify that I fulfil all the requirements in this regard and is eligible to be considered. *(Copy/ evidence of valid registration by the Competent Authority is to be attached)*

Place:

Date:

Signature of the Tenderer
Name & Address of the
Tenderer with Office Stamp